

Invited Testimony
Illinois Health Information Exchange Authority
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Good morning, Mr. Chairman and members of the committee. I am Harry Rhodes, Director of Practice Leadership for the American Health Information Management Association. I would like to thank you for the opportunity to testify and for your leadership on promoting secure health information technology in the State of Illinois.

AHIMA appreciates this opportunity to present testimony regarding the significance of accurate identification of individuals contained in a master patient (person) index (MPI) in a healthcare environment. Patient safety and quality of care may be compromised if the individual's data cannot be quickly, correctly, and uniquely matched for access to all of his or her health information

Patient Identity Integrity is the accuracy, quality, and completeness of data attached to or associated with an individual patient. This includes the accuracy and quality of the data as it relates to the individual, as well as the correctness of the linking or matching of all existing records for that individual within and across information systems.ⁱ

Over the past decade, multiple studies have documented the value of health information exchange (HIE). eHealth Initiative's recent "Fifth Annual Survey of Health Information Exchange at the State and Local Levels" found that 69 percent of fully operational exchange efforts reported reductions in healthcare costs.ⁱⁱ

Respondents indicated that HIE decreased dollars spent on redundant tests; reduced the number of patient admissions to hospitals for medication errors, allergies, or interactions; decreased the cost of care for chronically ill patients; or reduced staff time spent on administration. These results support recent findings from a RAND report stating that the potential benefits of a connected, interoperable healthcare system could save an estimated \$80 billion per year.ⁱⁱⁱ

However, in order to successfully exchange health information and reap the benefits of HIE, organizations must maintain accurate patient identification information. Patient identification integrity is a complex concept, and one that is not well understood throughout the healthcare industry. Many policy makers and industry leaders do not fully comprehend the negative effects of inaccurate patient identification information for even basic health information interchange.

A Master Patient Index (MPI) or Enterprise Master Patient Index (EMPI) may be found at the single electronic system level, facility level, enterprise or health information exchange (HIE)

level. An accurate MPI/EMPI, may be considered the most important resource in a healthcare setting because it is the link that tracks an individual's activity within an organization and across the continuum of care. Those individuals may be patients, providers, or members of a health plan.

The MPI/EMPI serves as the foundation for managing an individual's data to ensure identity integrity and to accurately link the individual's information. The MPI/EMPI serves as an essential component of accurate patient identification and therefore demands active data stewardship, data governance and many collaborative processes. Today's patient centric focus highlights the importance of standards and interoperability in building and maintaining the MPI/EMPI.

A key to locating and linking records, a complete, accurate MPI/EMPI is a critical part of patient information systems within and across healthcare organizations.

With the growth of health information exchange, the role of the MPI/EMPI is more critical than ever due to; increasing reliance on computerized patient information; development of health information exchange initiatives; integration of healthcare delivery systems (including the establishment of multihospital systems and vertical integration of hospitals, physician practices, home care agencies, long term care, and other non-acute facilities).

MPI/EMPI integrity impacts financial performance and administrative efficiency of the organization; successful data matching has become key to integrating computer-based clinical, financial, and demographic data across the continuum of care.

The goal of an HIE must be to allow authorized users to quickly and accurately exchange health information to enhance patient safety and improve efficiency. The success of this goal is dependent upon the ability to link (match) multiple, disparate records relating to a single individual.

A commitment to core HIM principles is important in the electronic health information environment; Critical HIM principles must be applied to electronic environment and effectively built into HIE workflows. HIM professionals must help health information exchange organizations to:

- Define the data exchange model and the specific data to be exchanged based on the HIE's mission, vision, purpose, and goals
- Develop standards for acceptable data quality that will be required of HIE participants, as well as how data quality will be measured
- Assess the process to capture patient identity as well as its consistency across each of the HIE's participating organizations
- Provide standards for each HIE participant's duplicate medical record rate and outline how this rate will be measured to ensure validity
- Audit the accuracy of the electronic linking of records within the HIE and provide evidence of the accuracy rate

- Audit the accuracy of the clinical documentation within HIE participants' electronic medical record and report the results to the HIE's governing board
- Develop privacy and security policies regarding methods for accessing the HIE system, provisioning, authorizing, and authenticating users, and auditing access^{iv}

Unless necessary measures to ensure complete and accurate data are taken at the provider and HIE levels, the strategic efforts under way to establish the Nationwide Health Information Network and improve the quality and safety of health care delivery will be compromised.

Patient Identity Work Group

In December, 2009 the HIMSS Patient Identity Integrity Work Group identified nine key issues that influence, to varying degrees, our ability to build and sustain database integrity.^v

These key influencers are:

- Industry standards,
- Interfaces, algorithms,
- Unique identifiers,
- Business processes,
- Data accuracy,
- Data quality,
- Training,
- Medical devices.

Description of Problem

The critical goal of patient identity management is the correct identification of the patient and linking of all related information to that individual within and across systems.

Connecting the wrong clinical information to a person can not only prove to be harm to the patient, but can also burden the healthcare provider with the cost of correcting and mitigating the error. Erroneous information impacts patient safety and compromises quality of care. Good clinical decisions based on bad data become bad clinical outcomes.

A local provider system with a poorly maintained or “dirty” master person index (MPI) will only proliferate and contaminate all of the other systems to which it links.

HIE's magnify the problem for several reasons:

- (a) The HIE doesn't have control of the patient identity data capture process,
- (b) HIE's receive data from a myriad of different provider MPIs the data elements of which are frequently not consistent and

(c) HIE's lack control over the interfaces coming into the HIE's database.

Industry Standards

IHE (www.ihe.net) is a global initiative that creates technical frameworks—freely available in the public domain—for passing vital health information seamlessly—from application to application, system to system, and setting to setting—across multiple healthcare settings. HITSP has incorporated numerous IHE Technical Framework and Profile components into their Interoperability Specifications (HITSP IS).

IHE integration profiles serve as a foundation for leveraging and aggregating patient information. Profiles are technology agnostic and can work in conjunction with whatever architecture is put in place.

In addition, standards need to be defined for data elements, algorithms, and record matching requirements within health data exchanges.

Interfaces, algorithms

The accuracy of data matches are often verified by various completing proprietary technological methods. MPI accuracy depends upon algorithmic formulas used to match and link data. These algorithms are frequently proprietary “black box” solutions. A lack of industry knowledge and scientific study on the reliability of these proprietary applications is available for comparison purposes. Consequently, no standards have been set for performance expectations or successful outcome ratio. In an ideal scenario, the matching outcome ratio would be 100% successful matches. Without any data on the effectiveness of the matching solutions, there is no way of knowing if they are functioning at a 99 percent or 75 percent level of successful match.

Unique identifiers

Progress on a unique identifier solution has been slow due to concerns about the cost to implement, privacy risks in amassing large centralized databases, and technical issues on compatibility with existing systems, as well as lack of national consensus on what identifier to use.

A unique identifier is linked to one individual, provides unambiguous identification, is immutable over time with consistent syntax, is simple of concept to implement, and is cost effective when compared with other solutions. More importantly, it is tremendously effective in reducing false negatives in the identity matching process.

Business Processes

A general lack of understanding, recognition, and ultimate funding of the business processes required to support and maintain PI Integrity. Business processes must define the business

process workflow, and organization policies and procedures necessary to ensure Patient Identity Integrity.

Training

Staff education and training are paramount to a success business process. The organization should establish a protocol for the routine monitoring of business workflows and processes, providing constructive feedback on the quality and accuracy of employee performance. Proper performance of the business workflows and processes cannot be measured without training and education that addresses expected knowledge and outcomes.

Medical Devices

Currently medical device incompatibility is a major problem in the Patient Identity Integrity accuracy. The Data incompatibility resulting from inconsistent formatting standards results in a lack of data exchange interoperability.

Current medical device standards have not adequately addressed the issues surrounding connectivity between devices and healthcare systems. Because there is no connectivity, the devices do not receive patient identifiable information or ADT information.

Before patient identity integrity management can realize its promise to improve quality, ensure safety, and reduce costs; the data attached to or associated with the individual patient must be accuracy and complete.

ⁱ Managing the Master Patient Index in a Healthcare Environment Resolution, *Submitted by MPI Taskforce: Barbara Demster, Lorraine Fernandes, Susan Torzewski, Monna Nabers, Victoria Wheatley, Approved by the 2010-2011 AHIMA House of Delegates*

ⁱⁱ eHealth Initiative. "Fifth Annual Survey of Health Information Exchange at the State and Local Levels." September 2008. Available online at www.ehealthinitiative.org/assets/Documents/eHI-HIESurveyResultsFinalReport-2008.pdf.

ⁱⁱⁱ Hillestad, Richard, et al. "Identity Crisis: An Examination of the Costs and Benefits of a Unique Patient Identifier for the U.S. Health Care System." 2008. RAND Corporation.

^{iv} Just, Beth, et al. "HIM Principles in Health Information Exchange." *Journal of AHIMA* 78, no. 8 (Sept. 2007): 69–74.

^v HIMSS Patient Identity Integrity Work Group. (2009, December). Patient Identity Integrity. http://www.himss.org/asp/topics_piitoolkit.asp